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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,385	04/20/2001	Mark A. Smith	10001074-1	2505

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/839,385		SMITH ET AL.	
	Examiner		Art Unit	
	Michael P Nghiem		2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-20, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 21 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Amendment filed on February 26, 2004 has been acknowledged.

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 26, 2004 has been entered.

Claim Objections

2. Claim 21 is objected to because of the following informalities: The claim should be directed to a method. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2863

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Shinada et al. (US 6,502,917).

Regarding claim 22, Shinada et al. discloses a replaceable ink container (40) for providing ink to an inkjet printing system (Fig. 1), the inkjet printing system having a receiving station (4), the receiving station having a plurality of corresponding electrical contacts (29), a fluid interconnect (6) and a sealing structure (support structure at the bottom of 6) surrounding the fluid interconnect (Fig. 3), the replaceable ink container comprising:

- a reservoir (41) for retaining ink having particles suspended therein (impurities of ink), the reservoir having a fluid outlet (44) configured for allowing passage of the fluid interconnect into the reservoir (Fig. 3);

- a sealing surface (bottom surface of 44 engaging support structure of 6, Fig. 3) surrounding the fluid outlet for engaging the sealing structure (Fig. 3), the sealing surface configured so that ink and particles suspended therein wet the sealing surface (upon removal of 6, ink leaks to bottom surface of 44);

- a plurality of electrical contacts (60-1, 60-2) disposed on the reservoir and electrically connected to an electrical storage device (61), the plurality of electrical

contacts configured for connection to the plurality of corresponding electrical contacts disposed in the receiving station (Figs. 3, 7's).

Regarding claim 23, Shinada et al. discloses that the reservoir includes a leading end (right end of 40) and a trailing end (left end of 40) relative to an insertion direction (right end of 40 inserted to engage 4 before left end is inserted, Fig. 9), and a bottom surface (bottom of 40) extending between the leading end and the trailing end (Fig. 3), and wherein the fluid outlet is disposed on the bottom surface of the reservoir (Fig. 3), and wherein the plurality of electrical contacts are disposed on the leading end of the reservoir (Fig. 3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomikawa et al. (US 6,039,441) in view of Aono et al. (US 6,471,321).

Regarding claims 1, 7, 10, 16, 17, and 20, Tomikawa et al. discloses a replaceable ink container (1, Fig. 1a) for providing ink to an inkjet printing system (Fig. 1b) and method

for forming a seal (Fig. 1's), the inkjet printing system having a receiving station (comprises 23, 27) for receiving the replaceable ink container (Fig. 1a), the receiving station having a fluid inlet (inlet of 23 surrounded by top portion of 22, Fig. 1b) and a sealing structure (22) around the fluid inlet (Fig. 1b), the replaceable ink container comprising:

- a reservoir (comprises 2) defining a fluid outlet (11) and a sealing surface (surface of 14) configured for engaging the sealing structure proximate the fluid outlet (Fig. 1b), wherein the fluid outlet is configured to allow passage of the fluid inlet into the reservoir (11 receives inlet of 23, Fig. 1b);

- a sealing material (ink in 1) contained within the reservoir for wetting the sealing surface (Figs. 1's), the sealing material between the sealing surface and the sealing structure (column 4, lines 25-26) acting to seal defects between the sealing surface and the sealing structure (ink meniscus between surface of 14 and 22, Fig. 1b).

Regarding claims 5 and 8, Tomikawa et al. discloses that the sealing material contained within the reservoir is a quantity of ink (Fig. 1a).

Regarding claims 6, 14, and 15, Tomikawa et al. discloses that the sealing surface is configured to be sufficiently wettable such that the sealing surface is wet by the sealing material (wet by ink, column 4, lines 25-26).

Regarding claim 18, Tomikawa et al. discloses a replaceable printhead (21).

However, Tomikawa et al. does not disclose the following claimed features:

- regarding claims 1, 7, 10, and 16, the sealing material including solid particles held in a suspension,
- regarding claims 2, 11, and 19, the solid particles are pigment particles,
- regarding claims 3 and 12, the solid particles are carbon black particles,
- regarding claims 4 and 13, the suspension is a dispersant.

Nevertheless, Aono et al. discloses an ink containing black pigments (column 10, line 7) and a dispersant (column 10, line 8) for the purpose of forming ink meniscus (column 10, line 10).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Tomikawa et al. with a pigment-based ink as disclosed by Aono et al. for the purpose of forming ink meniscus.

Allowable Subject Matter

5. Claims 21 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance

6. The combination or method as claimed wherein solidifying the sealing material comprises solidifying the sealing material in a groove in the sealing structure (claim 21) or a latch for securing the ink container to the receiving station, the latch disposed on the trailing end of the reservoir (claim 24) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

7. Applicant's arguments filed on February 26, 2004 have been considered but are not persuasive.

With respect to the 35 USC 103 rejections, Applicants argue that Tomikawa does not show, teach, or suggest a reservoir defining a fluid outlet and a sealing surface configured for engaging the sealing structure of the receiving station, wherein the fluid outlet is configured to allow passage of the fluid inlet into the reservoir.

Examiner's position is that Tomikawa discloses a reservoir (comprises 2) defining a fluid outlet (11) and a sealing surface (surface of 14) configured for engaging the sealing structure of the receiving station (Fig. 1b), wherein the fluid outlet is configured to allow passage of the fluid inlet into the reservoir (11 receives inlet of 23, Fig. 1b).

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Examiner's position with respect to the new claims 21-24 has been addressed above.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2272. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (571) 272-2269. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Michael Nghiem', with a stylized flourish at the end.

MICHAEL NGHIEM
PRIMARY EXAMINER
Michael Nghiem

March 11, 2004